

IONIC vs. COVALENT

Name _____

In general, how do the melting points differ between ionic and covalent bonded materials?

How does bonding affect whether a substance conducts electricity?

Based on the properties of the following materials, determine whether they are made primarily of ionic or covalent compounds. Explain your reasoning.

- a. Rubbing Alcohol
- b. Water
- c. Gasoline
- d. Table Salt
- e. Compound A has a melting point of 545 degrees Celsius and dissolves well in water.
- f. Compound B is a brittle material used to melt ~~road~~ ice during storms
- g. Compound C melts at 85 degrees Celsius and catches fire when heated to 570 degrees Celsius

Explain why ionic compounds are formed when a metal bonds with a nonmetal, but covalent compounds are formed when two nonmetals bond. Use the word electronegativity in your answer!

Complete the Lewis Dot Diagrams for the following. First indicate if the compound is ionic or covalent, and then draw the resulting structure. [LEWIS DOT DIAGRAM - MUST INCLUDE START AND FINISH DIAGRAMS FOR IONIC AND CIRCLES SHOWING SHARED E⁻ FOR COVALENT]

a. NaCl

b. CO₂

IONIC vs. COVALENT

Name _____

c. NH_3

d. O_2

e. Na_2O

f. I_2

g. CCl_4

h. MgO